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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,305

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Chon-Su Kyong

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EXAMINER

HALEY, JOSEPH R

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,305	Applicant(s) KYONG ET AL.	
	Examiner Joseph Haley	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 20-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Chung et al. (US 6443124).

In regard to claim 1, the admitted prior art, according to fig. 2 teaches a multiplexed holographic optical element for receiving beams reflected from an optical disc and diffracting the received beams according to wavelengths of the received beams (fig. 2 elements 14 and 15), and a light receiving element for receiving beams that are diffracted while passing through the multiplexed holographic optical element said light receiving element being externally independently movable (fig. 2 element 11, the photodetector stands alone in the light source module and is therefore independently movable), but does not teach a light emitting element for generating three beams with three different wavelengths and three holographic gratings.

Chung et al. teaches a light emitting element three beams with three different wavelengths and three holographic gratings (fig. 1 element 20, 30, and 40 Chung et al. teaches the use of 3 holograms and 3 different light sources. See also column 4 lines

58-60 where Chung et al. teaches the holograms can be optimized for any wavelength).

The two are analogous art because they both deal with the same field of invention of recording onto an optical medium.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of the applicant's admitted prior art with Chung et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of the applicant's admitted prior art with Chung et al. because it would allow for a more compact and easily manufactured apparatus for recording on 3 optical mediums.

However, Chung et al. does not teach these elements in a single light source module.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of the prior art and Chung et al. with a single light source module. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of the prior art and Chung et al. with a single light source module because it would reduce the size (see also MPEP 2144.04 section V paragraph B).

In regard to claim 2, the applicant's admitted prior art teaches holographic gratings of the multiplexed holographic optical element are formed on a same surface of a single substrate (see fig. 2).

In regard to claim 3, the applicant's admitted prior art teaches the holographic gratings of the multiplexed holographic optical element are arranged in layers (fig. 2).

In regard to claim 4, the applicant's admitted prior art teaches the multiplexed holographic optical element comprises: a transparent substrate on which a first holographic grating is formed; a first transparent layer on which a second holographic grating is formed; and a second transparent layer on which a third holographic grating is formed (fig. 2, the substrates must be transparent or the light wouldn't pass through).

In regard to claim 5, Chung et al. teaches the first through third holographic gratings are formed so that their grating depths are different from each other (column 4 lines 58-60 Chung et al. teaches the holograms can be optimized for any wavelength).

In regard to claim 6, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the depths of the grating equal to the value claimed in claim 6.

The motivation would have been: optimization/experimentation in the course of routine engineering. Moreover, absent a showing of criticality, i.e., unobvious or unexpected results, the relationships set forth in claim 6 is considered to be within the level of ordinary skill in the art.

Additionally, the law is replete with cases in which the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves

unexpected results relative to the prior art range(s); see *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions; see *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

In regard to claim 7, the prior art teaches the multiplexed holographic optical element further comprises a diffraction grating that diffracts a beam emitted from the light emitting element to be divided into a 0 order beam, a +1 order beam and a -1 order beam (paragraph 6 lines 4 and 5).

In regard to claim 8, the applicant's admitted prior art teaches the light emitting element and the multiplexed holographic optical element are fixedly located on a single package, and the light receiving element is located in a lower portion of the package to be independently movable (see fig. 2. In regard to the limitation independently moveable, it is understood from the specification the photodetector is placed in a position that would allow it to receive the returning light. It is inherent the photodetector would be placed in this position).

In regard to claim 9, Chung et al. teaches the light emitting element emits three beams having wavelengths of 650 nm, 780 nm and 405 nm, respectively (see column 4 lines 2-5. These wavelengths are known to be used for CDs, DVDs and HD-DVDs).

In regard to claim 10, see claim 1 rejection above.

In regard to claim 11, see claim 8 rejection above.

In regard to claim 20, the applicant's admitted prior art teaches wherein the said beams are substantially parallel (see fig. 2. While the prior art does not teach three beams it does teach two parallel beams. The rationale for adding a third beam is above).

In regard to claim 21, the applicant's admitted prior art teaches wherein said light source module emits the three beams along generally parallel axes (see fig. 2. While the prior art does not teach three beams it does teach two parallel beams. The rationale for adding a third beam is above).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Chung et al. further considered with Ito et al. (US 6643303).

In regard to claim 12, the applicant's prior art and Chung et al. teach all the elements of claim 12 except wherein the light receiving package is located outside the package to be independently movable.

Ito et al. teaches wherein the light receiving package is located outside the package to be independently movable (column 11 lines 20-22).

The three are analogous art because they all deal with the same field of invention of recording onto an optical disc.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Chung et al. and the applicant's admitted prior art with Ito et al. The rationale is as follows: At the time of invention it would have been obvious

to provide the apparatus of Chung et al. and the applicant's admitted prior art with Ito et al. because it could be adjusted for any irregularities in the optical system.

Response to Arguments

Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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